source to the top of a slab being cast within the continuous casting mold, the delivery means including

at least one delivery tube assembly including a flexible line, and an inline air pump which assures a positive flow of granular mold flux through the flexible line, and

a variable diameter pinch valve for controlling the flow rate of the granular mold flux from the intermediate hopper through the delivery tube, the pinch [tube] valve including a rubber sleeve through which the granular mold flux passes, and means to vary the diameter of the rubber sleeve between fully closed, fully open, and a plurality of intermediate positions so that the flow rate of the granular mold flux through the delivery tube may be varied.

13. (Amended) The apparatus for introducing granular mold flux onto the top of a slab being cast within a continuous casting mold as set forth in claim 12 wherein there is a single delivery tube assembly, the delivery tube having [a] discharge branches which can deliver granular mold flux to either side of a ceramic pouring tube, the delivery branches being downstream of the inline air pump.

14. (Amended) Apparatus for introducing granular mold flux onto the top of a slab being cast within a continuous casting mold; the apparatus comprising:

a source of granular mold flux;

an intermediate hopper which receives granular mold flux from the source; and

[a pone] one or more delivery tube assemblies interconnected with the intermediate hopper for insuring the feeding of the granular mold flux from the intermediate hopper to the top of the slab being cast within the continuous casting mold, each delivery tube assembly including a flexible line, and an inline air pump which assures a positive flow of granular mold flux through the flexible line.

In the abstract:

Apparatus for introducing granular mold flux onto the top of a slab being cast within a continuous casting mold, the apparatus having delivery apparatus for feeding granular mold flux from an intermediate hopper to the top of the slab being cast, the delivery apparatus including at least one delivery tube assembly interconnected with the intermediate hopper, and mechanism for controlling the flow rate of the granular mold flux through the delivery tube assembly. In the first two embodiments the flow rate control mechanism is a variable diameter pinch valve located between the intermediate hopper and the delivery tube assembly. In the third and fourth embodiments the flow rate control mechanism is an air pump and a mechanism for varying the air volume through the air pump so that the granular mold flux delivered is a function of the air volume of the air pump.